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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,751	07/31/2002	Karl-Willie Hoel	48046/DBP/T164	2804
23363	7590	09/21/2005		
CHRISTIE, PARKER & HALE, LLP PO BOX 7068 PASADENA, CA 91109-7068			EXAMINER NEWVILLE, TONI E	
			ART UNIT 3671	PAPER NUMBER

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/089,751

Applicant(s)

HOEL, KARL-WILLIE

Examiner

Toni Newville

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3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 27-54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "163" has been used to designate a second passage, a tool housing, and a valve piece (page 13 of specification). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

2. The disclosure is objected to because of the following informalities:
- Page 13: Reference number 163 is referred to as a "second passage" (line 14), "tool housing" (line 24), and "valve piece" (line 25). Appropriate correction is required.
  - Page 14: It appears that the reference number 60 after LIP-assembly should be changed to reference number 40.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States;

4. Claims 27-32, 37, 38, 41, 42, and 52-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Cowan, GB 2233365, cited by applicant.

Regarding claim 27, Cowan discloses a subsea lubricator for attachment to a subsea Christmas tree (page 5 paragraph 5 lines 1-2) inherently comprising at least one tree passage therethrough, said subsea lubricator comprising:

At least one lubricator passage (36) which inherently communicates with at least one tree passage in said subsea Christmas tree; and

At least one bypass assembly (Fig. 2A) comprising at least one bypass passage which communicates with at least one tree passage in said subsea Christmas tree.

Regarding claim 28, the at least one bypass assembly (Fig. 2A) further comprises at least one lower bypass pipe (area of 121, 108a) and at least one upper

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bypass pipe (107, 108, 109, connection of 4a to 100) removably connected (via 4a, 4b) to said at least one lower bypass pipe (area of 121, 108a).

Regarding claim 29, the at least one bypass assembly (Fig. 2A) comprises at least two upper bypass pipes (107, 108, 109, connection of 4a to 100).

Regarding claim 30, Cowan further discloses a tool housing portion (32) comprising an upper end (98) and a bore (75) which defines a portion of said at least one lubricator passage (36). Cowan further discloses said bypass assembly (Fig. 2A) further comprising a crossover assembly (piston 91 / bore 90 / channel 100 arrangement) for fluidly connecting said at least one upper bypass pipe (107) with said at least one lubricator passage (36) at a location proximate to said upper end (98) of said tool housing portion (32).

Regarding claim 31, Cowan further discloses a pressure control assembly (generally 5a) disposed generally below said tool housing portion (6), said pressure control assembly (5a) comprising a lower end (generally 2), a bore (Fig. 1) which defines a portion of said at least one lubricator passage (36), and at least one pressure control valve (5a) for selectively closing said at least one lubricator passage (36), said bypass assembly further comprising a valve assembly (Fig. 2A) for fluidly connecting said at least one lower bypass pipe (area of 121, 108a) with said at least one lubricator

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passage (36) at a location below (right side of Fig. 2A) said at least one pressure control valve (5a).

Regarding claim 32, said crossover assembly (91, 90, 100) further comprises a connector (4a, 4b) for fluidly connecting said crossover assembly (91, 90, 100) to an external fluid source (10).

Regarding claim 37, the lubricator further comprises an adaptor (8), said valve assembly forming a portion of said adaptor (Fig. 2A).

Regarding claim 38, the adaptor (8) is removably attached to the pressure control assembly (5a), the adaptor comprising a subsea connector adapted for connection to said tree.

Regarding claim 41, the crossover assembly (91, 90, 100) acts as a valve actuator.

Regarding claim 42, Cowan discloses an inherent method of use, comprising:

- Providing at least one bypass passage (107) fluidly connecting said subsea lubricator to said subsea Christmas tree (via 36);
- Connecting said subsea lubricator to a source of first external fluid (24).

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- Injecting said first external fluid (24) into said subsea lubricator to displace a first internal fluid within said subsea lubricator (page 13 lines 3-7); and
- Circulating said first internal fluid to said subsea well through said bypass passage (107) into an external flow line (7).

Regarding claim 52, the limitations therein have been described above with regards to claims 27, 28 and 30.

Regarding claim 53, the limitations therein have been described above with regards to claim 33.

Regarding claim 54, the limitations therein have been described above with regards to claim 37.

5. Claim 49 is rejected under 35 U.S.C. 102(b) as being anticipated by Coutts, WO 93/03254.

Coutts discloses a method for killing a subsea well using a subsea intervention device, including a subsea well (14) having a subsea tree (32) landed thereon, said method comprising:

Landing a subsea device on said subsea tree (32), said subsea device comprising at least one valve (18);

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Providing at least one bypass passage (102) fluidly connecting said subsea tree with a source of kill fluid; and

When said at least one valve (18) is closed, injecting said kill fluid into said well through said bypass passage (102) and said subsea tree (32).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 33-36, 39, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowan, GB 2233365, cited by applicant, in view of Schroeder et al., US 4705114.

Regarding claim 33, Cowan discloses a subsea lubricator for connection to a Christmas tree as described above, including a lubricator passage (36) and a bypass assembly (Fig. 2A) comprising a valve assembly. Cowan further discloses said valve assembly further comprising a first inlet fluidly connected to said at least one lower bypass pipe (area of 121), a second inlet fluidly connected to a subsea umbilical (100), and a first outlet (108a) fluidly connected to a production passage (36) in said subsea



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Christmas tree. Cowan fails to disclose a second outlet fluidly connected to an annulus passage in a subsea Christmas tree.

Like Cowan, Schroeder discloses a subsea well intervention apparatus, including a lubricator passage (63) and a bypass assembly (68). Unlike Cowan, Schroeder discloses an outlet (68) fluidly connected to an annulus passage (38) in a subsea production tree (Fig. 3).

Given the suggestion in Schroeder, it would have been obvious to one of ordinary skill in the art to modify Cowan as taught in Schroeder by including an outlet (68) fluidly connected to an annulus passage (38) in a subsea production tree (Fig. 3) so the annulus is fluidly accessible for pressure equalization or fluid circulation.

Regarding claim 34, the valve assembly in Cowan comprises check valves (114) disposed in each of said first and second inlets.

Regarding claim 35, the valve assembly in Cowan comprises a stop valve (114) disposed in said first outlet.

Regarding claim 36, the valve assembly in Cowan comprises a stop valve (114) disposed in said second outlet.

Regarding claim 39, Cowan discloses a subsea lubricator for connection to a Christmas tree as described above, including a production passage (36), a first adaptor

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passage (connection of 8 to 100) for fluidly connecting said at least one lubricator passage with said production passage (36) in said tree, and a second adaptor passage (107, 108, 108a, 109). Cowan fails to disclose an annulus passage, with an adaptor passage fluidly connecting a lower bypass pipe with the annulus passage.

Like Cowan, Schroeder discloses a subsea well intervention apparatus, including a lubricator passage (63) fluidly connected to a production passage (39) in a subsea tree (37) and a bypass assembly (68). Unlike Cowan, Schroeder discloses the bypass assembly (68) fluidly connected to an annulus passage (38) in the tree (37).

Given the suggestion in Schroeder, it would have been obvious to one of ordinary skill in the art to connect a bypass assembly (68) to the inherent annular passage of the tree in Cowan so the annulus is fluidly accessible for pressure equalization or fluid circulation.

Regarding claims 50 and 51, the method for circulating fluids is inherent in the device described in the combination of Cowan and Schroeder as applied to claim 39 above.

8. Claim 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cowan, GB 2233365, cited by applicant, in view of Hainebach, US 3712862.

Cowan discloses a subsea lubricator for connection to a Christmas tree as described above, including a production passage (36), a first adaptor passage for fluidly connecting said at least one lower bypass pipe (108a) with said production passage

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(36) in said tree, and a second adaptor passage (107, 108, 108a, 109). Cowan fails to disclose an annulus passage, with an adaptor passage fluidly connecting a lubricator passage with the annulus passage.

Like Cowan, Hainebach discloses a subsea well intervention apparatus, including a lubricator passage (10) and a bypass assembly (27) fluidly connected to a production passage (19) in a subsea tree (11). Unlike Cowan, Hainebach discloses the lubricator passage (10) fluidly connected to an annulus passage (38) in the tree (37).

Given the suggestion in Hainebach, it would have been obvious to one of ordinary skill in the art to connect a lubricator passage (Hainebach; 10) to the inherent annular passage of the tree in Cowan so the annulus is fluidly accessible for pressure equalization or fluid circulation.

9. Claims 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowan, GB 2233365, cited by applicant, in view of Doremus et. al., US 4658904.

Regarding claim 44, Cowan discloses a method of circulating fluid in a subsea intervention device as described above, including a first external fluid. Cowan fails to disclose using a hydrate inhibitor as the first external fluid.

Like Cowan, Doremus discloses a method of circulating fluid in a subsea intervention device. Unlike Cowan, Doremus discloses using a hydrate inhibitor (column 5 lines 21-24) as the external fluid.

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Given the suggestion in Doremus, it would have been obvious to one of ordinary skill in the art to modify Cowan as taught in Doremus by using a hydrate inhibitor as the external fluid to prevent the formation of hydrates (column 13 lines 49-53), thereby preventing hydrocarbon solids from blocking the narrow passages of the lubricator.

Regarding claim 45, it is commonly known the art that methanol and glycol are standard hydrate inhibitors.

10. Claims 43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowan, GB 2233365, cited by applicant, in view of Coutts, WO 93/03254.

Regarding claim 43, Cowan discloses a method of circulating fluid in a subsea intervention device as described above, including a first external fluid. Cowan fails to disclose using water as the first external fluid.

Like Cowan, Coutts discloses a method of circulating fluid in a subsea intervention device. Unlike Cowan, Coutts discloses using water (page 15 lines 6-7) as the external fluid.

Given the suggestion in Coutts, it would have been obvious to one of ordinary skill in the art to using water as the external fluid in the circulation method of Cowan because water is readily available on offshore rigs, so its use eliminates transportation and disposal costs.

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Regarding claim 46, Cowan discloses a method of circulating fluid in a subsea intervention device as described above, including a first external fluid. Cowan fails to disclose using a diluent fluid as the first external fluid.

Like Cowan, Coutts discloses a method of circulating fluid in a subsea intervention device. Unlike Cowan, Coutts discloses using barites mud or brine (page 15 lines 6-7) as the external fluid.

Given the suggestion in Coutts, it would have been obvious to one of ordinary skill in the art to using a diluent fluid such as barites mud or brine in the circulation method of Cowan so that sands or other particulate matter can be cleaned up by the circulation procedure.

11. Claims 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cowan, GB 2233365, cited by applicant, in view of Coutts, WO 93/03254, as applied to claims 43 and 46 above, and further in view of Doremus et. al., US 4658904.

Cowan and Coutts disclose combination of methods of circulating fluid in a subsea intervention device as described above, including water as a first external fluid and a first internal fluid. The internal fluid could inherently be water (claim 47) or produced hydrocarbons (claim 48). Cowan further discloses a series of tanks and umbilicals capable of handling injection of a second external fluid (Fig. 2B) (claim 48). Cowan and Coutts fail to disclose using a hydrate inhibitor as the first external fluid.

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Like the combination of Cowan and Coutts, Doremus discloses a method of circulating fluid in a subsea intervention device, including a first internal fluid and a first external fluid. Unlike the combination of Cowan and Coutts, Doremus discloses using a hydrate inhibitor (column 5 lines 21-24) as the external fluid.

Given the suggestion in Doremus, it would have been obvious to one of ordinary skill in the art to modify the combination of Cowan and Coutts as taught in Doremus by using a hydrate inhibitor as the external fluid to prevent the formation of hydrates (column 13 lines 49-53), thereby preventing hydrocarbon solids from blocking the narrow passages of the lubricator.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

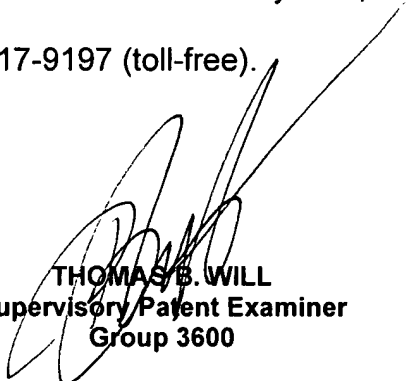
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toni Newville whose telephone number is (571) 272 - 1548. The examiner can normally be reached on Monday - Friday 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on (571) 272-6998. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Toni Newville  
September 16, 2005



THOMAS B. WILL  
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Group 3600